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| 10/606,498 | 06/26/2003 | Clifford D. Bennett | 442005-00105 | 5227 |

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| EXAMINER | |
|---|---|
| A, PHI DIEU TRAN | |
| **ART UNIT** | **PAPER NUMBER** |
| 3637 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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| 3 MONTHS | 12/21/2006 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/606,498 | BENNETT ET AL. | |
| | Examiner | Art Unit | |
| | Phi D. A | 3637 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *8/2/06 and 10/13/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1,4-8,10-13,16,17,19-24 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-8,10-13,16,17,19-24 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5, 8, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029).

Hartzheim shows a chair for supporting and spacing concrete reinforcement members comprising a unitary integrally formed body including an upper receiving area and a lower base, the receiving area adapted to receive the concrete reinforcement members and including at least two pairs of diametrically opposed notches (32s, 34s, figure 1), the pair of notches having different depths to enable the supporting of the members at different heights and in perpendicular relationship to one another, the base adapted to rest on a planar support surface, the body having an inner surface and an outer surface, the surfaces being substantially complementary to each other to allow a plurality of chairs to be stacked within one another for storage and shipment (figure 23), each notch comprising a bearing surface, the base including a plurality of support legs (26) extending downwardly from the receiving area and defining a plurality of apertures (24), the apertures operable to allow poured concrete to pass fluidly through the body (inherently capable of functioning as claimed), the base having four support legs, the four support legs including foot member (450, figure 18) extending horizontally outwardly therefrom, the support

legs include a thickened band of material (28) around the apertures, the chair is made of polypropylene and is one piece injection molded (col 6 lines 43-44), the apertures are arch-shaped.

Hartzheim does not show the bearing surface of each notch defined by a lip extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface.

Moesta discloses the bearing surface of each notch defined by a lip (16) extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface to provide for extra supporting surface for the tubular member (6).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's structure to show the bearing surface of each notch defined by a lip extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface because it would provide more supporting surface for a tubular structure as taught by Moesta.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) as applied to claim 1 above, and further in view of Evans (3682422).

Hartzheim as modified shows all the claimed limitations except for each of the pairs of notches being connected by a bridge therebetween, the bridge connecting the troughs of the notches.

Evans (figure 5) shows a chair having notches connected by a bridge (46) therebetween, the bridge connecting the troughs of the notches.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show each of the pairs of notches being connected by a bridge therebetween, the bridge connecting the troughs of the of the notches because having bridges connecting troughs of notches would reinforce the notches against compression forces as taught by Evans.

5. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029)

Hartzheim as modified shows all the claimed limitations except for only two of the four legs having foot members extending horizontally outwardly therefrom, the foot members extending from two diagonally opposite support legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show only two of the four legs having foot members extending horizontally outwardly therefrom, the foot members extending from two diagonally opposite support legs because it would allow for the lateral reinforcing of at least one pair of opposing legs as needed and save on the material for the pair of legs not needing the extra lateral support.

6. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) as applied to claim 1 above and further in view of Haslem et al (6089522).

Hartzheim as modified shows all the claimed limitations except for the base including upper and lower support legs, the upper support legs extending downwardly form the receiving

area and defining upper apertures, the lower support legs extending downwardly form the upper support legs and defining lower apertures.

Haslem et al (figure 6, 8) shows a base including upper (44) and lower (22) support legs, the upper support legs extending downwardly form the receiving area and defining upper apertures (48), the lower support legs extending downwardly form the upper support legs and defining lower apertures (the space between 32 and 34).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show the base including upper and lower support legs, the upper support legs extending downwardly form the receiving area and defining upper apertures, the lower support legs extending downwardly form the upper support legs and defining lower aperture because the different levels of support legs allow the chair to support rebars at different levels with the upper apertures allowing concrete to completely fill and covering the rebar, and the lower apertures allowing the chair to be placed over the lower placed rebars while supporting a first layer of rebars as taught by Haslem et al.

Per claim 11, Hartzheim as modified by Haslem et al further shows the lower legs being longer than the upper support legs.

Per claim 12, Hartzheim as modified shows all the claimed limitations except for the lower support legs having a thickened band of material around the lower apertures.

Haslem et al further shows a thickened band of material (36) around the lower apertures to reinforce the structural integrity of the legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show the lower support legs having a

thickened band of material around the lower apertures because it would reinforce the structural integrity and strength of the support legs around the apertures as taught by Haslem et al.

7. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) as applied to claim 1 above and further in view of Haslem et al (6089522).

Hartzheim as modified shows all the claimed limitations except for a plurality of ribs on the outer surface to facilitate separating the chair from a stack.

Haslem et al discloses the use of ribs (24) on the outer surface of the legs and extending outwardly form an outer profile of the body to reinforce the legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show a plurality of ribs on the outer surface because having ribs on the legs would reinforce the legs as taught by Haslem et al.

Hartzheim as modified shows legs with ribs that inherently are able to facilitate separating an individual chair from a stack.

8. Claims 17, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) and Haslem et al (6089522).

Hartzheim shows a chair for supporting and spacing concrete reinforcement members comprising a unitary integrally formed hollow body including an inner surface, an outer surface, a receiving area and a base, the base defining a lower opening and adapted to rest on a planar support surface, the receiving area adapted to receive the concrete reinforcement members and including a first and second pairs of diametrically opposed notches (32s, 34s, figure 1), the second pair of notches being oriented ninety degrees from the first pair, the first pair of notches

being deeper than the second pair of notches, the reinforcement members can be positioned at different heights and in perpendicular relationships to one another within the receiving area, the base including a plurality of support legs defining a plurality of apertures therebetween, the apertures operable to allow poured concrete to pass fluidly through the chair, the body is generally funnel-shaped with the lower opening being larger than the receiving area, and the inner and outer surfaces being substantially complementary to each other to allow a plurality of chairs to be stacked within each other for storage and shipment (figure 23), each notch comprising a bearing surface, the apertures are arch-shaped, the support legs having a thickened band of material (28) around the apertures

Hartzheim does not show the bearing surface of each notch defined by a lip extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface, a plurality of ribs on the outer surface and extending outwardly from an outer profile of the body to facilitate separating an individual chair from a stack.

Moesta discloses the bearing surface of each notch defined by a lip (16) extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface to provide for extra supporting surface for the tubular member (6).

Haslem et al discloses the use of ribs (24) on the outer surface of the legs and extending outwardly form an outer profile of the body to reinforce the legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's structure to show the bearing surface of each notch defined by a lip extending inwardly from the outer surface such that the bearing surface is cantilevered beyond the inner surface, a plurality of ribs on the outer surface and extending outwardly from

an outer profile of the body to facilitate separating an individual chair from a stack because having a lip on the notch would provide more supporting surface for a tubular structure as taught by Moesta, and having ribs on the legs would reinforce the legs as taught by Haslem et al.

Hartzheim as modified shows legs that inherently are able to facilitate separating an individual chair from a stack.

9. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) and Haslem et al as applied to claim 17 above, and further in view of Evans (3682422).

Hartzheim as modified shows all the claimed limitations except for a bridge extends between each of the pairs of notches, the bridge joining the medial, lowest portions of the notches.

Evans (figure 5) shows a chair having notches connected by a bridge (46) therebetween, the bridge joining the medial, lowest portions of the notches.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show a bridge extends between each of the pairs of notches, the bridge joining the medial, lowest portions of the notches because having bridges connecting troughs of notches would reinforce the notches against compression forces as taught by Evans.

10. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) and Haslem et al.

Hartzheim as modified shows all the claimed limitations except for only two of the four legs having foot members extending horizontally outwardly therefrom, the foot members extending from two diagonally opposite support legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show only two of the four legs having foot members extending horizontally outwardly therefrom, the foot members extending from two diagonally opposite support legs because it would allow for the lateral reinforcing of at least one pair of opposing legs as needed and save on the material for the pair of legs not needing the extra lateral support.

11. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartzheim (5729949) in view of Moesta (3582029) and Haslem et al (6089522).

Hartzheim as modified shows all the claimed limitations except for the base including upper and lower support legs, the upper support legs extending downwardly form the receiving area and configured to support the receiving area, the lower support legs extending downwardly form the upper support legs and configured to support the upper support legs.

Haslem et al (figure 6, 8) further shows a base including upper (44) and lower (22) support legs, the upper support legs extending downwardly form the receiving area and configured to support the receiving area, the lower support legs extending downwardly form the upper support legs and configured to support the upper support legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show the base including upper and lower support legs, the upper support legs extending downwardly form the receiving area and

configured to support the receiving area, the lower support legs extending downwardly form the upper support legs and configured to support the upper support legs because the different levels of support legs allow the chair to support rebars at different levels as taught by Haslem et al.

Per claim 24, Hartzheim as modified shows all the claimed limitations except for the lower support legs having a thickened band of material around the apertures.

Haslem et al further shows a thickened band of material (36) around the apertures to reinforce the structural integrity of the legs.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hartzheim's modified structure to show the lower support legs having a thickened band of material around the apertures because it would reinforce the structural integrity and strength of the support legs around the apertures as taught by Haslem et al.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1, 4-8, 10-13, 16-17, 19-24, 26 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different rebars chair designs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 571-272-6864. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 571-272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phi Dieu Tran A

12/15/06